REMARKS

Claims 1-25, 27, 30-32 and 34-35 have been previously canceled. Claims 26 and 36 are amended and no new claims have been added or canceled by way of this response. Thus, claims 26, 28-29, 33, 36-50 are currently pending and presented for examination. Applicants respectfully request reconsideration and allowance of the pending claims in view of the foregoing amendments and the following remarks.

Response to Rejections Under Section 112:

Claims 26, 28, 29, 33, and 36-50 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants appreciate the Examiner's thoughtful suggestions to resolve the indefiniteness issues for claims 26 and 36. Applicant's have amended claims 26 and 36 in accordance with the Examiners suggestions and respectfully request the Examiner withdraw the section 112, second paragraph rejections.

Response to Rejections Under Section 103:

Claims 26, 28, 29, 33, 37-39, and 43-48 are rejected under 35 U.S.C. §103(a) as being unpatentable over Vogt et al. (US 6,120,624) in view of Lake (US 1,531,445), and further in view of Higgins (*Engineering Metallurgy, Part I: Applied Physical Metallurgy*, 6th edition). Claims 36 and 50 are rejected under 35 U.S.C. §103(a) as being unpatentable over Vogt et al. (US 6,120,624) in view of Lake (US 1,531,445) and further in view of Higgins (*Engineering Metallurgy, Part I: Applied Physical Metallurgy*, 6th edition) and Hashiguchi (US 2002/0162611). Claims 40 and 41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Vogt et al. (US 6,120,624) in view of Lake (US 1,531,445), and further in view of Higgins (*Engineering Metallurgy, Part I: Applied Physical Metallurgy*, 6th edition) and Heitman et al. (US 5,071,059). Claim 42 is rejected under 35 U.S.C. §103(a) as being unpatentable over Vogt et al. (US 6,120,624) in view of Lake (US 1,531,445), and further in view of Higgins(*Engineering Metallurgy, Part I: Applied Physical Metallurgy*, 6th edition), Heitman et al. (US 5,071,059), and Schweizer et al. (US 4,222,794).

Claim 26:

Applicant's amended claim 26 recites in part:

> ... casting the component from a melt of the alloy, wherein the casting step includes
> pouring the molten alloy into a casting mold, and
> **solidifying** the molten alloy;
> **redensifying** the component in a furnace **immediately after the casting step** ...; and
> **overaging** the redensified component, **in an intermediate step,** via an overaging heat treatment immediately after the step of redensifying and in the same furnace **without cooling of the redensified component** between the redensifying and the overaging steps ...

Regarding claim 26, the Examiner has applied Vogt et al. in view of Lake further in view of Higgins, contending that the combination teaches the invention of claim 26. Applicant's respectfully disagree and submit that the above combination would not result in Applicant's claimed invention of claim 26. Specifically, the combination of Vogt et al. in view of Lake further in view of Higgins would provide a method for casting a nickel-based super alloy having a pre-heated mold and performed under pressure to minimize shrinkage and porosity of the cast part as taught by Lake and then heat treating the alloy as taught by Vogt et al. where the cooling rate of the cast part influences the microstructure and properties of the finished cast part as taught by Higgins and not **discrete steps** of casting the component including "...**solidifying** the molten alloy," and then **in a separate step** "...**redensifying** the component in a furnace **immediately after the casting step** ...; and **overaging** the redensified component, **in an intermediate step,** via an overaging heat treatment ... **without cooling of the redensified component** ...."

Furthermore, the above combination as applied by the Examiner in the instant Office Action does not include a discrete redensifying step after solidification of the cast part.

Moreover, the Examiner concedes that "Vogt et al. fail[s] to teach the claimed cooling rate" of 2°C to 3°C/min but the Examiner asserts that it would have been obvious to one of ordinary skill in the art to apply a different cooling rate. Applicants respectfully disagree with the Examiners assertion and submit that the cooling rate taught by Vogt et al., **less than** 1.7°C/min and **preferably less than** 0.6°C/min, is substantially slower than Applicants claimed cooling rate of 2°C to 3°C/min. Applicant's inventive cooling rate is approximately twice as fast as that taught by Vogt et al. and a faster rate is not suggested. Applicants respectfully submit

that the faster cooling rate of claim 26 (2°C to 3°C/min) therefore is outside the scope of the teachings of Vogt et al., since Vogt suggests only those cooling rates that are slower than 1.7°C/min, and the faster cooling rate of claim 26, therefore, is not suggested by Vogt's range of slower rates.

In light of the above, Applicant's respectfully submit that the combination of Vogt et al. in view of Lake further in view of Higgins does not teach the invention of claim 26 and request the Examiner withdraw the Section 103 rejection. Furthermore, claims 28-29, 33, 36-50 which depend on claim 26 are also patentable at least based on their dependence from claim 26 as well as based on their own merits. Therefore, Applicants respectfully request that the Examiner withdraw the Section 103 rejections and timely pass the application to allowance.

Conclusion

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, Applicants respectfully request that the Examiner reconsider the rejections and timely pass the application to allowance. All correspondence should continue to be directed to our below-listed address. Please grant any extensions of time required to enter this paper. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

Dated: Jan. 06, 2009

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